

B07KQ6-DAT-234

0044124



A SORENSEN COMPANY

March 9, 1993

REPORT INTRODUCTION
ANALYTICAL COMMENTARY

SUBMITTED TO: Briana Colley

SUBMITTED BY: Reed A. Hendricks

REFERENCE DATA:

Analysis of: 1 soil sample

Method of Analysis: EPA 8270

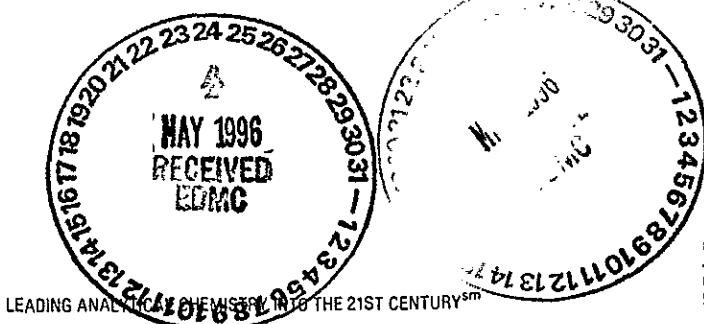
Identification No: S93-0091-II

DataChem Laboratory No: EM0387

The above numbered sample was analyzed for base-neutral and acid compounds by gas chromatography/mass spectrometry. EPA Test Method 8270 was followed with modifications. (United States Environmental Protection Agency; Office of Solid Waste and Emergency Response, SW-846 November 1986).

EPA Method 3550 was used for preparation of the samples prior to analysis. Thirty grams of soil sample were extracted with methylene chloride using sonication. Surrogate standards were added prior to the extraction as prescribed. The total volume of the sample after extraction and concentration was one milliliter. Internal standards were added to each sample and standard mixture prior to analysis.

Separation of the compounds of interest was obtained with a 30 m, 0.32 mm internal diameter, DB-5 fused silica capillary column. Oven temperature was programmed from 50 degrees centigrade (held isothermally for 4 minutes) to 300 degrees centigrade at 10 degrees centigrade per minute. A 75 second splitless injection interval was used. Analysis was performed using a Hewlett-Packard 5971 GC/MS/DS system, scanning a mass range of 35 to 500 amu each second.



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960 WEST LEVOY DRIVE
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CINCINNATI, OHIO 45242-3706
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The initial calibration of the instrument was performed at concentrations of 160, 120, 80, 50 and 20 ug/mL. Calibration check compounds (CCC's) specified by the method are acenaphthene, 1,4-dichlorobenzene, hexachlorobutadiene, N-nitroso-di-n-phenylamine, di-n-octylphthalate, fluoranthene, benzo(a)pyrene, 4-chloro-3-methylphenol, 2,4-dichlorophenol, 2-nitrophenol, phenol, pentachlorophenol, and 2,4,6-trichlorophenol. The relative standard deviation of the response factor (RF) for each CCC in the initial standards was less than the 30% criteria required by the method. System performance check compounds (SPCC's) specified in the method are N-nitroso-di-n-propylamine, hexachlorocyclopentadiene, 2,4-dinitrophenol, and 4-nitrophenol. The minimum response factors for the SPCC's were greater than the 0.050 required in the method.

The continuing calibration of the instrument was performed at a concentration of 50 ug/mL for all compounds. The response factors for all CCC's were within the maximum percent difference of 25% compared to the initial curve; SPCC's response factors were greater than the minimum RF of 0.050. DFTPP performance criteria was met for all sample and standard analyses.

DataChem Laboratories will maintain a complete record of this data on magnetic tape along with hard copies of the ion chromatograms, mass spectra, surrogate recovery summary, and verification of compliance with EPA tuning (DFTPP) and chromatography criteria.

Surrogate standard recoveries were monitored and are reported on the Surrogate Recovery Summary form at the end of the report.

The results for each sample are reported twice in the report; first on the Target Analyte Summary Report and again on the Analytical Report (results by sample). The report follows.



A handwritten signature in black ink, appearing to read "Reed A. Hendricks".

Reed A. Hendricks

TARGET ANALYTE SUMMARY REPORT
EPA METHOD 8270, 3rd ED.
Page 1 of 4

Sponsor: Westinghouse-Hanford Company Results ug/kg

DCL Sample No. EM0387 Blank
Client Sample No. B07KQ6

COMPOUND

| | | |
|-----------------------------|---|---|
| N-nitroso-dimethylamine | U | U |
| phenol | U | U |
| bis(2-chloroethyl)ether | U | U |
| 2-chlorophenol | U | U |
| 1,3-dichlorobenzene | U | U |
| 1,4-dichlorobenzene | U | U |
| benzyl alcohol | U | U |
| 1,2-dichlorobenzene | U | U |
| 2-methylphenol | U | U |
| bis(2-chloroisopropyl)ether | U | U |
| 4-methylphenol | U | U |
| N-nitroso-di-n-propylamine | U | U |
| hexachloroethane | U | U |
| nitrobenzene | U | U |
| isophorone | U | U |
| 2-nitrophenol | U | U |
| 2,4-dimethylphenol | U | U |
| bis(2-chloroethoxy)methane | U | U |
| benzoic acid | U | U |
| 2,4,-dichlorophenol | U | U |
| 1,2,4-trichlorobenzene | U | U |
| naphthalene | U | U |
| 4-chloroaniline | U | U |
| hexachlorobutadiene | U | U |
| 4-chloro-3-methylphenol | U | U |
| 2-methylnaphthalene | U | U |
| hexachlorocyclopentadiene | U | U |
| 2,4,6-trichlorophenol | U | U |
| 2,4,5-trichlorophenol | U | U |
| 2-chloronaphthalene | U | U |
| 2-nitroaniline | U | U |

See footnotes on page 4 .

TARGET ANALYTE SUMMARY REPORT
EPA METHOD 8270, 3rd ED.
Page 2 of 4

Sponsor: Westinghouse-Hanford Company Results ug/kg

DCL Sample No. EM0387 Blank
Client Sample No. B07KQ6

COMPOUND

| | | |
|----------------------------|---|---|
| dimethylphthalate | U | U |
| 2,6-dinitrotoluene | U | U |
| acenaphthylene | U | U |
| 3-nitroaniline | U | U |
| acenaphthene | U | U |
| 2,4-dinitrophenol | U | U |
| 4-nitrophenol | U | U |
| dibenzofuran | U | U |
| 2,4-dinitrotoluene | U | U |
| diethylphthalate | U | U |
| 4-chlorophenyl-phenylether | U | U |
| fluorene | U | U |
| 4-nitroaniline | U | U |
| 2-methyl-4,6-dinitrophenol | U | U |
| N-nitroso-diphenylamine | U | U |
| 1,2-diphenylhydrazine | U | U |
| 4-bromophenyl-phenylether | U | U |
| .alpha.-BHC | U | U |
| .beta.- BHC | U | U |
| hexachlorobenzene | U | U |
| pentachlorophenol | U | U |
| .gamma.-BHC | U | U |
| phenanthrene | U | U |
| anthracene | U | U |
| .delta.-BHC | U | U |
| heptachlor | U | U |
| di-n-butylphthalate | U | U |
| aldrin | U | U |
| heptachlor epoxide | U | U |
| fluoranthene | U | U |
| pyrene | U | U |

See footnotes on page 4 .

TARGET ANALYTE SUMMARY REPORT
EPA METHOD 8270, 3rd ED.
Page 3 of 4

Sponsor: Westinghouse-Hanford Company Results ug/kg

DCL Sample No. EM0387 Blank
Client Sample No. B07KQ6

COMPOUND

| | | |
|----------------------------|---|---|
| endosulfan I | U | U |
| 4,4'-DDE | U | U |
| dieldrin | U | U |
| endrin aldehyde | U | U |
| endrin | U | U |
| 4,4'-DDD | U | U |
| endosulfan II | U | U |
| butylbenzylphthalate | U | U |
| 4,4'-DDT | U | U |
| endosulfan sulfate | U | U |
| p,p'-methoxychlor | U | U |
| 3,3'-dichlorobenzidine | U | U |
| benzo(a)anthracene | U | U |
| bis(2-ethylhexyl)phthalate | U | U |
| chrysene | U | U |
| di-n-octylphthalate | U | U |
| benzo(b)fluoranthene | U | U |
| benzo(k)fluoranthene | U | U |
| benzo(a)pyrene | U | U |
| indeno(1,2,3-cd)pyrene | U | U |
| dibenz(a,h)anthracene | U | U |
| benzo(g,h,i)perylene | U | U |
| endrin ketone | U | U |
| 2-picoline | U | U |
| ethylmethanesulfonate | U | U |
| methylmethanesulfonate | U | U |
| aniline | U | U |
| acetophenone | U | U |
| N-nitroso-piperidine | U | U |
| a,a-dimethylphenethylamine | U | U |
| 2,6-dichlorophenol | U | U |

See footnotes on page 4 .

TARGET ANALYTE SUMMARY REPORT
EPA METHOD 8270, 3rd ED.
Page 4 of 4

Sponsor: Westinghouse-Hanford Company Results ug/kg

DCL Sample No. EM0387 Blank
Client Sample No. B07KQ6

COMPOUND

| | | |
|----------------------------|---|---|
| N-nitroso-di-n-butylamine | U | U |
| 1,2,4,5-tetrachlorobenzene | U | U |
| 1-chloronaphthalene | U | U |
| pentachlorobenzene | U | U |
| 1-naphthylamine | U | U |
| 2,3,4,6-tetrachlorophenol | U | U |
| 2-naphthylamine | U | U |
| phenacetin | U | U |
| 4-aminobiphenyl | U | U |
| pronamide (propyzamide) | U | U |
| pentachloronitrobenzene | U | U |
| benzidine | U | U |
| p-dimethylaminoazobenzene | U | U |
| -dimethylbenz(a)anthracene | U | U |
| 3-methylchloranthrene | U | U |
| chlordane | U | U |
| toxaphene | U | U |
| PCB-1016 | U | U |
| PCB-1221 | U | U |
| PCB-1232 | U | U |
| PCB-1242 | U | U |
| PCB-1248 | U | U |
| PCB-1254 | U | U |
| PCB-1260 | U | U |

FOOTNOTES

- B The analyte was found in the method blank.
U Not detected
J Indicates an estimated concentration below the Method Detection Limit.
S Indicates that compound is a matrix spike analyte.

ANALYTICAL REPORT FOR SAMPLE No. EM0387

Page 1 of 5
 EPA METHOD 8270, 3rd ED.
 TARGET ANALYTE RESULTS

Field Sample ID: B07KQ6

Date Extracted: 2/25/93

DataChem Set ID: S93-0091-II

Date of Analysis: 3/5/93

| ANALYTICAL REPORT FOR SAMPLE No. EM0387 | | |
|---|-----------------------------|--------------------------------------|
| Page 1 of 5 EPA METHOD 8270, 3rd ED. TARGET ANALYTE RESULTS | | |
| Sponsor: Westinghouse-Hanford Company | File ID: CJ4E87 | Method Detection Limit (MDL) (ug/kg) |
| CAS No. | COMPOUND | RESULTS (ug/kg) |
| 62-75-9 | N-nitroso-dimethylamine | 1.0E + 3 |
| 108-95-2 | phenol | 3.3E + 2 |
| 111-44-4 | bis(2-chloroethyl)ether | 3.3E + 2 |
| 95-57-8 | 2-chlorophenol | 3.3E + 2 |
| 541-73-1 | 1,3-dichlorobenzene | 3.3E + 2 |
| 106-46-7 | 1,4-dichlorobenzene | 3.3E + 2 |
| 100-51-6 | benzyl alcohol | 1.0E + 3 |
| 95-50-1 | 1,2-dichlorobenzene | 3.3E + 2 |
| 95-48-7 | 2-methylphenol | 3.3E + 2 |
| 39638-329 | bis(2-chloroisopropyl)ether | 3.3E + 2 |
| 106-44-5 | 4-methylphenol | 3.3E + 2 |
| 621-64-7 | N-nitroso-di-n-propylamine | 3.3E + 2 |
| 67-72-1 | hexachloroethane | 3.3E + 2 |
| 98-95-3 | nitrobenzene | 3.3E + 2 |
| 78-59-1 | isophorone | 3.3E + 2 |
| 88-75-5 | 2-nitrophenol | 3.3E + 2 |
| 105-67-9 | 2,4-dimethylphenol | 3.3E + 2 |
| 111-91-1 | bis(2-chloroethoxy)methane | 3.3E + 2 |
| 65-85-0 | benzoic acid | 1.0E + 3 |
| 120-83-2 | 2,4,-dichlorophenol | 3.3E + 2 |
| 120-82-1 | 1,2,4-trichlorobenzene | 3.3E + 2 |
| 91-20-3 | naphthalene | 3.3E + 2 |
| 106-47-8 | 4-chloroaniline | 3.3E + 2 |
| 87-68-3 | hexachlorobutadiene | 3.3E + 2 |
| 59-50-7 | 4-chloro-3-methylphenol | 3.3E + 2 |
| 91-57-6 | 2-methylnaphthalene | 3.3E + 2 |
| 77-47-4 | hexachlorocyclopentadiene | 3.3E + 2 |
| 88-06-2 | 2,4,6-trichlorophenol | 3.3E + 2 |
| 95-95-4 | 2,4,5-trichlorophenol | 8.0E + 2 |
| 78-59-1 | 2-chloronaphthalene | 3.3E + 2 |
| 88-75-5 | 2-nitroaniline | 8.0E + 2 |

ANALYTICAL REPORT FOR SAMPLE No. EM0387

Page 2 of 5

EPA METHOD 8270, 3rd ED.
TARGET ANALYTE RESULTS

Field Sample ID: B07KQ6

| CAS No. | COMPOUND | RESULTS (ug/kg) | Method Detection Limit (MDL) (ug/kg) |
|-----------|----------------------------|--------------------|---|
| 131-11-3 | dimethylphthalate | U | 3.3E + 2 |
| 606-20-2 | 2,6-dinitrotoluene | U | 3.3E + 2 |
| 208-96-8 | acenaphthylene | U | 3.3E + 2 |
| 99-09-2 | 3-nitroaniline | U | 8.0E + 2 |
| 83-32-9 | acenaphthene | U | 3.3E + 2 |
| 51-28-5 | 2,4-dinitrophenol | U | 8.0E + 2 |
| 100-02-7 | 4-nitrophenol | U | 8.0E + 2 |
| 132-64-9 | dibenzofuran | U | 3.3E + 2 |
| 121-14-2 | 2,4-dinitrotoluene | U | 3.3E + 2 |
| 84-66-2 | diethylphthalate | U | 3.3E + 2 |
| 7005-72-3 | 4-chlorophenyl-phenylether | U | 3.3E + 2 |
| 86-73-7 | fluorene | U | 3.3E + 2 |
| 100-01-6 | 4-nitroaniline | U | 8.0E + 2 |
| 534-52-1 | 2-methyl-4,6-dinitrophenol | U | 8.0E + 2 |
| 86-30-6 | N-nitroso-diphenylamine | U | 3.3E + 2 |
| 122-66-7 | 1,2-diphenylhydrazine | U | 1.0E + 3 |
| 101-55-3 | 4-bromophenyl-phenylether | U | 3.3E + 2 |
| 319-84-6 | .alpha.-BHC | U | 1.0E + 3 |
| 319-85-7 | .beta.- BHC | U | 5.0E + 3 |
| 118-74-1 | hexachlorobenzene | U | 3.3E + 2 |
| 87-86-5 | pentachlorophenol | U | 8.0E + 2 |
| 58-89-9 | .gamma.-BHC | U | 1.0E + 3 |
| 85-01-8 | phenanthrene | U | 3.3E + 2 |
| 120-12-7 | anthracene | U | 3.3E + 2 |
| 319-86-8 | .delta.-BHC | U | 5.0E + 3 |
| 76-44-8 | heptachlor | U | 5.0E + 3 |
| 84-74-2 | di-n-butylphthalate | U | 3.3E + 2 |
| 309-00-2 | aldrin | U | 5.0E + 3 |
| 1024-57-3 | heptachlor epoxide | U | 5.0E + 3 |
| 206-44-0 | fluoranthene | U | 3.3E + 2 |
| 129-00-0 | pyrene | U | 3.3E + 2 |

ANALYTICAL REPORT FOR SAMPLE No. EM0387

Page 3 of 5

EPA METHOD 8270, 3rd ED.
TARGET ANALYTE RESULTS

Field Sample ID: B07KQ6

| CAS No. | COMPOUND | RESULTS (ug/kg) | Method Detection Limit (MDL) (ug/kg) |
|------------|----------------------------|--------------------|---|
| 959-98-8 | endosulfan I | U | 5.0E+3 |
| 72-55-9 | 4,4'-DDE | U | 5.0E+3 |
| 60-57-1 | dieldrin | U | 5.0E+3 |
| 7421-93-4 | endrin aldehyde | U | 5.0E+3 |
| 72-20-8 | endrin | U | 5.0E+3 |
| 72-54-8 | 4,4'-DDD | U | 5.0E+3 |
| 33213-65-9 | endosulfan II | U | 5.0E+3 |
| 85-68-7 | butylbenzylphthalate | U | 3.3E+2 |
| 50-29-3 | 4,4'-DDT | U | 5.0E+3 |
| 1031-07-8 | endosulfan sulfate | U | 5.0E+3 |
| 72-43-5 | p,p'-methoxychlor | U | 1.0E+3 |
| 91-94-1 | 3,3'-dichlorobenzidine | U | 1.0E+3 |
| 56-55-3 | benzo(a)anthracene | U | 3.3E+2 |
| 117-81-7 | bis(2-ethylhexyl)phthalate | U | 3.3E+2 |
| 218-01-9 | chrysene | U | 3.3E+2 |
| 117-84-0 | di-n-octylphthalate | U | 3.3E+2 |
| 205-99-2 | benzo(b)fluoranthene | U | 3.3E+2 |
| 207-08-9 | benzo(k)fluoranthene | U | 3.3E+2 |
| 50-32-8 | benzo(a)pyrene | U | 3.3E+2 |
| 193-39-5 | indeno(1,2,3-cd)pyrene | U | 3.3E+2 |
| 53-70-3 | dibenz(a,h)anthracene | U | 3.3E+2 |
| 191-24-2 | benzo(g,h,i)perylene | U | 3.3E+2 |
| 53494-70-5 | endrin ketone | U | 1.0E+3 |
| 109-06-8 | 2-picoline | U | 1.0E+3 |
| 62-50-0 | ethylmethanesulfonate | U | 1.0E+3 |
| 66-27-3 | methylmethanesulfonate | U | 1.0E+3 |
| 62-53-3 | aniline | U | 1.0E+3 |
| 98-86-2 | acetophenone | U | 1.0E+3 |
| 100-75-4 | N-nitroso-piperidine | U | 1.0E+3 |
| 122-09-8 | a,a-dimethylphenethylamine | U | 1.0E+3 |
| 87-65-0 | 2,6-dichlorophenol | U | 1.0E+3 |

ANALYTICAL REPORT FOR SAMPLE No. EM0387

Page 4 of 5

EPA METHOD 8270, 3rd ED.
TARGET ANALYTE RESULTS

Field Sample ID: B07KQ6

| CAS No. | COMPOUND | RESULTS (ug/kg) | Method Detection Limit (MDL) (ug/kg) |
|------------|--------------------------------|--------------------|---|
| 924-16-3 | N-nitroso-di-n-butylamine | U | 1.0E +3 |
| 95-94-3 | 1,2,4,5-tetrachlorobenzene | U | 1.0E +3 |
| 90-13-1 | 1-chloronaphthalene | U | 1.0E +3 |
| 608-93-5 | pentachlorobenzene | U | 1.0E +3 |
| 134-32-7 | 1-naphthylamine | U | 1.0E +3 |
| 58-90-2 | 2,3,4,6-tetrachlorophenol | U | 1.0E +3 |
| 91-59-8 | 2-naphthylamine | U | 1.0E +3 |
| 62-44-2 | phenacetin | U | 1.0E +3 |
| 92-67-1 | 4-aminobiphenyl | U | 1.0E +3 |
| 23950-58-5 | pronamide (propyzamide) | U | 1.0E +3 |
| 82-68-8 | pentachloronitrobenzene | U | 1.0E +3 |
| 92-87-5 | benzidine | U | 1.0E +3 |
| 60-11-7 | p-dimethylaminoazobenzene | U | 1.0E +3 |
| 57-97-6 | 7,12-dimethylbenz(a)anthracene | U | 1.0E +3 |
| 56-49-5 | 3-methylchloranthrene | U | 1.0E +3 |
| 57-74-9 | chlordan | U | 1.0E +4 |
| 8001-35-2 | toxaphene | U | 1.0E +4 |
| 12674-11-2 | PCB-1016 | U | 1.0E +4 |
| 11104-28-2 | PCB-1221 | U | 1.0E +4 |
| 11141-16-5 | PCB-1232 | U | 1.0E +4 |
| 53469-21-9 | PCB-1242 | U | 1.0E +4 |
| 12672-29-6 | PCB-1248 | U | 1.0E +4 |
| 11097-69-1 | PCB-1254 | U | 1.0E +4 |
| 11096-82-5 | PCB-1260 | U | 1.0E +4 |

ANALYTICAL REPORT FOR SAMPLE No. EM0387

Page 5 of 5

NON-TARGET ANALYTE RESULTS
Additional Semi-Volatiles

Field Sample ID: B07KQ6

| CAS No. | COMPOUND | Scan Number | Results ug/kg | Footnotes |
|---------|----------------------------|-------------|---------------|-----------|
| -- | Aldol-condensation product | 254 | 7.5E + 2 | NEB |
| -- | Aldol-condensation product | 287 | 2.7E + 2 | NEB |

FOOTNOTES

- B The analyte was found in the method blank.
- E The reported concentration is an estimate only. The response factor was assumed to be 1.00 relative to an internal standard.
- K The isomer is unknown.
- N Analytical standards were not analyzed for this compound.



ANALYTICAL REPORT

Form ARF-AL

Page 1 of 5

Part 1 of 4

MAR 22 1993

Date

Agency Identification Number S93-0091-GI

Amount No. 3534C

Westinghouse Hanford Company
2355 Stevens Drive
MSIN H4-23 345 Hill Street/300 A
Richland, WA 99352
Attention: Briana Colley



FAX (509) 372-2106

Telephone (509) 373-3225

Sampling Collection and Shipment

Sampling Site _____ Date of Collection February 16, 1993

Date of Collection February 16, 1993

Date Samples Received at Laboratory February 22, 1993

Analysis

Method of Analysis EPA 8141

Date(s) of Analysis March 08, 1993

Analytical Results

† See comment on last page.
ND Parameter not detected.
NR Parameter not requested.

** See comment on last page.
() parameter between LOD and LOQ.

Kirsch

~~Analyst: Khang C. Tran~~

~~Reviewer: Don Wickman~~

Laboratory Supervisor: Jose C. Danino



ANALYTICAL REPORT

Form ARF-AL

Page 2 of 5

Part 2 of 4

Date MAR 22 1993

Agency Identification Number S93-0091-GI

Account No. 3534C

Westinghouse Hanford Company
2355 Stevens Drive
MSIN H4-23 345 Hill Street/300 Area
Richland, WA 99352
Attention: Briana Colley

FAX (509) 372-2106

Telephone (509) 373-3225

Sampling Collection and Shipment

Sampling Site _____ Date of Collection February 16, 1993

Date of Collection February 16, 1993

Date Samples Received at Laboratory February 22, 1993

Analysis

Method of Analysis EPA 8141

Date(s) of Analysis March 08, 1993

Analytical Results

† See comment on last page.
ND Parameter not detected.
NR Parameter not requested.

() parameter between LOD and LOQ.



ANALYTICAL REPORT

Form ARF-AL

Page 3 of 5

Part 3 of 4

Date MAR 22 1993

Agency Identification Number S93-0091-GI

Account No. 3534C

Westinghouse Hanford Company
2355 Stevens Drive
MSIN H4-23 345 Hill Street/300 Area
Richland, WA 99352
Attention: Briana Colley

FAX (509) 372-2106

Telephone (509) 373-3225

Sampling Collection and Shipment

Sampling Site _____ Date of Collection February 16, 1993

Date of Collection February 16, 1993

Date Samples Received at Laboratory February 22, 1993

Analysis

Method of Analysis EPA 8141

Date(s) of Analysis March 08, 1993

Analytical Results

† See comment on last page.
ND Parameter not detected.
NR Parameter not requested.

() Parameter between LOD and LOQ.



ANALYTICAL REPORT

Form ARF-AL

Page 4 of 5

Part 4 of 4

Date MAR 22 1993

Agency Identification Number S93-0091-GI

Account No. 3534C

Westinghouse Hanford Company
2355 Stevens Drive
MSIN H4-23 345 Hill Street/300 Area
Richland, WA 99352
Attention: Briana Colley

FAX (509) 372-2106
Telephone (509) 373-3225

Sampling Collection and Shipment

Sampling Site _____ Date of Collection February 16, 1993

Date of Collection February 16, 1993

Date Samples Received at Laboratory February 22, 1993

Analysis

Method of Analysis EPA 8141

Date(s) of Analysis March 08, 1993

Analytical Results

† See comment on last page.
ND Parameter not detected.
NR Parameter not requested.

** See comment on last page.
{} parameter between LOD and LOQ.



ANALYTICAL REPORT

Form ARF-C
Page 5 of 5

Date MAR 22 1993

Agency Identification Number S93-0091-GI

General Set Comments

The samples were spiked with the surrogate triphenylphosphate at .33 µg/g.
The Laboratory Control Sample was spiked with phorate, disulfoton, and parathion methyl at .066 µg/g.

Westinghouse
Hanford Company

CHAIN OF CUSTODY

Custody Form Initiator Jonathan G. Lucas
Company Contact Frank W. Gustafson
Project Designation/Sampling Locations North Slope ERA -
H-12-L, H-07-H, H-90, 2, 4-D burial site
Ice Chest No. RM #40
Bill of Lading/Airbill No. 2536953440
Method of Shipment EMERY 12-22-93
Shipped to Beta Chem Salt Lake City, UT
Possible Sample Hazards/Remarks None

Telephone 376-1736
Collection Date 2-16, 17-93
Field Logbook No. EFL-1031-2
Offsite Property No. W93-0-0285 #6

Sample Identification

| | |
|---|--|
| <u>B07K05</u>) | <u>B07KR97</u>) EM 0389 |
| <u>B07K06</u>) S01 (1-250ml/ag/each) EM 0387 | <u>B07KS07</u>) S01 (2-120ml/ag/each) EM 0390 |
| <u>B07K97</u>) | <u>B07KS1</u>) EM 0391 |
| <u>B07KR3</u>) S01 (2-120ml/ag/each) | <u>B07KS2</u>) |
| <u>B07KR4</u>) EM 0388 | |
| <u>B07KRS</u>) S01 (1-120ml/ag, 1-250ml/ag, | |
| <u>B07KR6</u>) 3-120ml/ag) | |
| <u>B07KR8</u>) | |

[] Field Transfer of Custody Chain of Possession (Sign and Print Names)

| Relinquished By | Date | Time | Received By | Date | Time |
|--|----------------|-------------|--------------------|----------------|-------------|
| <u>Jonathan G. Lucas</u> <u>jonathan g. lucas</u> | <u>2-22-93</u> | <u>1100</u> | <u>(Signature)</u> | <u>2-22-93</u> | <u>1100</u> |
| | | | | | |
| | | | | | |
| | | | | | |

Final Sample Disposition

| Disposal Method: | Disposed by: | Date/Time: |
|--|--------------|----------------|
| Comments: These are copies. Originals w/ set SX-0059 | | <u>2-22-93</u> |

RADIOACTIVE
CATEGORY I



SPECIAL HANDLING INFORMATION

ATTENTION:

The following samples have been screened and categorized as "Category I" radioactive samples:

DCL sample ID numbers

screened by:

(initials) JY

EM 0387 _____
0388 _____
0389 _____
0390 _____
↓ 0391 _____

Category I samples are defined as having activity levels of less than 0.01 microCurie, gross alpha, and less than 0.1 microCurie, gross beta, per sample aliquot.

HANDLING

These activity levels require only the usual hygiene precautions which are taken with all potentially toxic or hazardous environmental samples. They present an internal contamination hazard only (e.g. ingestion, inhalation, injection). Use appropriate personal protective equipment and work under fume hoods or canopies.

Please place all sample residuals in labeled plastic bags or jars and turn them over to Safety and Environmental Affairs personnel for screening prior to disposal. DCL sample ID numbers should be indicated on the container labels. This includes filters, wipes and rinsate generated processing the sample, and in cleaning off implements and glassware.

Please address any questions or concerns to the Safety and Environmental Affairs section.



Westinghouse
Hanford Company

SAMPLE ANALYSIS REQUEST

Collector Frank W. GustafsonDate 2-19-93Company Contact Frank W. GustafsonTelephone (509) 376-7736

| Sample Number | * | Date Collected | Time Collected | Number and Type of Sample Containers/Analysis Requested |
|---------------|---|----------------|---------------------------|---|
| B07KQ5 | S | 2-16-93 | 1200 | 1 - 20-250 ml aG - Semi VOA (CLP), 8140 |
| B07KQ7 | S | 2-16-93 | 1315, 1425, 1520 | PCB/Pests (CLP), Phosphorous Pests (CLP), Herbicides (8150) |
| B07KQ6 | S | 2-17-93 | 1004, 1102, 1144, 1226 | 1 - 250 ml aG - VOA (8240), Semi VOA (8270), PCB/Pests (8080), Phosphorus Pests (8140), Herbicides (8150) |

Note: Samples B07KQ6 and B07KQ7 are composite samples. The date and time of actual sampling are 2-19-93 @ 1050 (B07KQ6) and 1059 hrs (B07KQ7)

RADIOACTIVE CATEGORY I

| | | | | | |
|-------------------|----------|-------------|---------------|------------|-----------|
| *Type of Sample | A = Air | L = Liquid | SE = Sediment | T = Tissue | X = Other |
| DL = Drum Liquids | O = Oil | SL = Sludge | W = Water | | |
| DS = Drum Solids | S = Soil | SO = Solid | WI = Wipe | | |

Field Information _____

Special Handling and/or Storage Cool 41°C.

Possible Sample Hazards _____



**Westinghouse
Hanford Company**

SAMPLE ANALYSIS REQUEST

Collector Craig A. Rowley

Date 2-18-93

Company Contact Frank W. Gustafson

Telephone (509) 376-1736

RADIOACTIVE CATEGORY I

***Type of Sample** A = Air L = Liquid SE = Sediment T = Tissue X = Other
 DL = Drum Liquids O = Oil SL = Sludge W = Water
 DS = Drum Solids S = Soil SO = Solid WI = Wipe

Field Information

Special Handling and/or Storage Cool 4°C

Possible Sample Hazards



Westinghouse
Hanford Company

SAMPLE ANALYSIS REQUEST

Collector Craig A. Rowley
Company Contact Frank Gustafson

Date 2-18-93

Telephone (509) 376-1736

| Sample Number | * | Date Collected | Time Collected | Number and Type of Sample Containers/Analysis Requested |
|--|---|----------------|----------------|--|
| BOTKR4 | S | 2-16-93 | 1530-1540 | 1 - 120ml gS - VOA (CLP) |
| BOTKR6 | S | 2-16-93 | 1530-1540 | 1 - 250ml aG - Semi VOA (CLP), PCB/Pests (CLP), Phosphorus Pests (8140), Herbicides (8150) |
| BOTKR8 | S | 2-16-93 | 1620 | 1 - ²⁻¹⁸⁻⁹³ 120ml aG - AA metals (As, Pb, Se, Tl-CLP), Hg (CLP), ICP metals (CLP) 1 - 120ml aG - Anions (F, Cl, PO ₄ , SO ₄ - EPA 300.0), (NO ₂ , NO ₃ - EPA 353.3), Chromium VI (EPA 218.4) 1 - 120ml aG - TPH (EPA 418.1) |
| Note: For sample BOTKR6, a 1 l aG bottle replaces the 250 ml aG. | | | | |
| BOTKR9 | S | 2-17-93 | 0950 | 1 - 120ml aG - ICP metals (6010), AA metals (7060), |
| BOTKSO | S | 2-17-93 | 0950 | Pb (7420), Se (7740), Tl (7840), Hg (7471) |
| BOTKS1 | S | 2-17-93 | 1330 | 1 - 120ml aG - TPH (EPA 418.1) |
| BOTKS2 | S | 2-17-93 | 1340 | 1 - 120ml aG - ICP metals (CLP), AA metals (As, Pb, Se, Tl - CLP), Hg (CLP) 1 - 120ml aG - TPH (EPA 418.1) |

RADIOACTIVE CATEGORY I

| | | | | | |
|-----------------|-------------------|------------|---------------|------------|-----------|
| *Type of Sample | A = Air | L = Liquid | SE = Sediment | T = Tissue | X = Other |
| | DL = Drum Liquids | O = Oil | SL = Sludge | W = Water | |
| | DS = Drum Solids | S = Soil | SO = Solid | WI = Wipe | |

Field Information --

Special Handling and/or Storage Cool / 4°C

Possible Sample Hazards --



ANALYTICAL REPORT

Form ARF-AL

Page 1 of 3

Part 1 of 2

APR 06 1993

Date _____

Agency Identification Number S93-0091-FI

Account No. 3534C

Westinghouse Hanford Company
2355 Stevens Drive
MSIN H4-23 345 Hill Street/300 Area
Richland, WA 99352
Attention: Briana Colley

APR 1993
RECEIVED
05M D40

FAX (509) 372-2106
Telephone (509) 373-3225

Sampling Collection and Shipment

Sampling Site _____ of Collection February 16, 1993

Date Samples Received at Laboratory February 22, 1993

Analysis

Method of Analysis EPA 8150

Date(s) of Analysis March 26, 1993

Analytical Results

† See comment on last page.
ND Parameter not detected.
NR Parameter not requested.

** See comment on last page
Parameter between LOD an

() Parameter between LOB and 100.

RECORDED COPY

~~Analyst: John Meikle~~

Reviewer: David R. Fischer

Laboratory Supervisor: Jose C. Danino

960 West LeVoy Drive / Salt Lake City, Utah 84123-2547 / (801) 266-7700
A Sorenson Company



ANALYTICAL REPORT

Form ARF-AL

Page 2 of 3

Part 2 of 2

Date 10/10/93

Agency Identification Number S93-0091-FI

Account No. 3534C

Westinghouse Hanford Company
2355 Stevens Drive
MSIN H4-23 345 Hill Street/300 Area
Richland, WA 99352
Attention: Briana Colley

FAX (509) 372-2106
Telephone (509) 373-3225

Sampling Collection and Shipment

Sampling Site _____ Date of Collection February 16, 1993

Date Samples Received at Laboratory February 22, 1993

Analysis

Method of Analysis EPA 8150

Date(s) of Analysis March 26, 1993

Analytical Results

† See comment on last page.
ND Parameter not detected.
NR Parameter not requested.

** See comment on last page.
() Parameter between LOD and LOQ.



ANALYTICAL REPORT

Form ARF-C
Page 3 of 3

Date APR 06 1993

Agency Identification Number S93-0091-FI

General Set Comments

The samples were spiked with the surrogate, 2,4-dichlorophenylacetic acid (DCCA), at 500 µg/kg.

This set batched together with one from another customer for analysis. Recoveries of 2,4-D, 2,4,5-T and 2,4,5-TP spiked into the laboratory control sample, matrix spike and matrix spike duplicate were within normal QC limits.



ANALYTICAL REPORT

Form ARF-AL

Page 1 of 3

Part 1 of 2

Date 5-17-93

Agency Identification Number S93-0091-FI

Account No. 3534C

Westinghouse Hanford Company
2355 Stevens Drive
MSIN H4-23 345 Hill Street/300 Area
Richland, WA 99352
Attention: Briana Colley

FAX (509) 372-2106

Telephone (509) 373-3225

Sampling Collection and Shipment

Sampling Site _____ Date of Collection February 16, 1993

Date Samples Received at Laboratory February 22, 1993

Analysis

Method of Analysis EPA 8150

Date(s) of Analysis March 26, 1993

Analytical Results

f See comment on last page.
ND Parameter not detected.
NR Parameter not requested.

() Parameter between LOD and LOQ.

~~Analyse: John Meikle~~

Reviewer: David R. Fischer

Laboratory Supervisor: Jose C. Danino

960 West LeVoy Drive / Salt Lake City, Utah 84123-2547 / (801) 266-7700
A Sorenson Company



ANALYTICAL REPORT

Form ARF-AL

Page 2 of 3

Part 2 of 2

AMENDED

Date S-77-43
Agency Identification Number S93-0091-FI
Account No. 3534C

Westinghouse Hanford Company
2355 Stevens Drive
MSIN H4-23 345 Hill Street/300 Area
Richland, WA 99352
Attention: Briana Colley

FAX (509) 372-2106
Telephone (509) 373-3225

Sampling Collection and Shipment

Sampling Site _____ Date of Collection February 16, 1993

Date Samples Received at Laboratory February 22, 1993

Analysis

Method of Analysis EPA 8150

Date(s) of Analysis March 26, 1993

Analytical Results

f See comment on last page.
ND Parameter not detected.
NR Parameter not requested.

** See comment on last page.
() Parameter between LOD and LOQ.



ANALYTICAL REPORT

Form ARF-C

Page 3 of 3

AMENDED

Date 5-17-93

Agency Identification Number S93-0091-FI

General Set Comments

The samples were spiked with the surrogate, 2,4-dichlorophenylacetic acid (DCCA), at 500 µg/kg; recovery was 542 µg/kg or 108 percent.

This set batched together with one from another customer for analysis. Recoveries of 2,4-D, 2,4,5-T and 2,4,5-TP spiked into the laboratory control sample, matrix spike and matrix spike duplicate were within normal QC limits.

VALIDATION SUMMARY

MEMORANDUM

JUN 23 1993

RECEIVED
VALIDATION DOCUMENTATION
SDIA 21, 1993

TO: North Slope ERA Data Validation Project QA Record

FR: Susan Winter, Golder Associates Inc. *S. Winter*

RE: Data Validation Summary for Data Package: B07KQ6-DAT-234

INTRODUCTION

This memo presents the results of data validation on data package B07KQ6-DAT-234 consisting of one (1) soil sample submitted for semivolatile, pesticide/PCB, organochlorine herbicides, and organophosphorus pesticides analyses, however, due to a spiking error in extractions, the pesticide/PCB analysis was canceled. The sample was analyzed for the requested parameters by the DataChem laboratory using SW-846 methods. The following table describes the samples validated, sample dates and analyses performed.

| SAMPLE ID | SAMPLE DATE | BNA | PEST PCB | HERB | PHOS PEST |
|-----------|-------------|-----|----------|------|-----------|
| B07KQ6 | 02/17/92 | X | CANCELED | X | X |

Data validation was conducted in accordance with the WHC statement of work (WHC 1993) and validation procedures (Bechtold 1992) in which twenty percent (20%) of the samples were assigned for validation. The sample in this data set was verified and blank adjusted as summarized below since it was not selected for full data validation.

Attachments 1 through 3 provide a data qualification summary form, copies of the verified laboratory reports, and associated laboratory supplemental information.

DATA QUALITY OBJECTIVES

Sample Result Verification. The data package was complete and the results were supported in the raw data for all analyses performed.

MAJOR DEFICIENCIES

The following presents a summary of the rejected data.

The semivolatile tentatively identified compounds (TICs) identified as aldol condensation products have been rejected (R) in sample B07KQ6 and in the associated laboratory blank since they are suspected laboratory contaminants.

MINOR DEFICIENCIES

The following qualifications were required as a result of the blank adjustment.

Blank Adjustment. The results for all associated blank samples were undetected with the exception of the aldol condensation products detected in the semivolatile fraction which were rejected (R) as noted above. Therefore, no further qualification was required.

REFERENCES

WHC, 1993, Westinghouse Hanford Company, North Slope ERA Data Validation, Task Order G-93-01-58. Westinghouse Hanford Company, Richland, Washington.

Bechtold, 1992, Westinghouse Hanford Company, Data Validation Procedures for Chemical Analyses, WHC-SD-EN-SPP-002, Rev. 1, 1992. Westinghouse Hanford Company, Richland, Washington.

ATTACHMENT 1

DATA QUALIFICATION SUMMARY

DATA QUALIFICATION SUMMARY - FORM B-7

B07KQB-0A1-234

ATTACHMENT 2
VERIFIED DATA SUMMARY

ANALYTICAL REPORT FOR SAMPLE No. EM0387

Page 1 of 5
 EPA METHOD 8270, 3rd ED.
 TARGET ANALYTE RESULTS

Field Sample ID: B07K06

Date Extracted: 2/25/93

DataChem Set ID: S93-0091-II

Date of Analysis: 3/5/93

Sponsor: Westinghouse-Hanford Company

File ID: CJ4E87

Method
Detection
Limit (MDL)
(ug/kg)

| CAS No. | COMPOUND | RESULTS (ug/kg) | |
|-----------|-----------------------------|--------------------|----------|
| 62-75-9 | N-nitroso-dimethylamine | U | 1.0E + 3 |
| 108-95-2 | phenol | U | 3.3E + 2 |
| 111-44-4 | bis(2-chloroethyl)ether | U | 3.3E + 2 |
| 95-57-8 | 2-chlorophenol | U | 3.3E + 2 |
| 541-73-1 | 1,3-dichlorobenzene | U | 3.3E + 2 |
| 106-46-7 | 1,4-dichlorobenzene | U | 3.3E + 2 |
| 100-51-6 | benzyl alcohol | U | 1.0E + 3 |
| 95-50-1 | 1,2-dichlorobenzene | U | 3.3E + 2 |
| 95-48-7 | 2-methylphenol | U | 3.3E + 2 |
| 39638-329 | bis(2-chloroisopropyl)ether | U | 3.3E + 2 |
| 106-44-5 | 4-methylphenol | U | 3.3E + 2 |
| 621-64-7 | N-nitroso-di-n-propylamine | U | 3.3E + 2 |
| 67-72-1 | hexachloroethane | U | 3.3E + 2 |
| 98-95-3 | nitrobenzene | U | 3.3E + 2 |
| 78-59-1 | isophorone | U | 3.3E + 2 |
| 88-75-5 | 2-nitrophenol | U | 3.3E + 2 |
| 105-67-9 | 2,4-dimethylphenol | U | 3.3E + 2 |
| 111-91-1 | bis(2-chloroethoxy)methane | U | 3.3E + 2 |
| 65-85-0 | benzoic acid | U | 1.0E + 3 |
| 120-83-2 | 2,4,-dichlorophenol | U | 3.3E + 2 |
| 120-82-1 | 1,2,4-trichlorobenzene | U | 3.3E + 2 |
| 91-20-3 | naphthalene | U | 3.3E + 2 |
| 106-47-8 | 4-chloroaniline | U | 3.3E + 2 |
| 87-68-3 | hexachlorobutadiene | U | 3.3E + 2 |
| 59-50-7 | 4-chloro-3-methylphenol | U | 3.3E + 2 |
| 91-57-6 | 2-methylnaphthalene | U | 3.3E + 2 |
| 77-47-4 | hexachlorocyclopentadiene | U | 3.3E + 2 |
| 88-06-2 | 2,4,6-trichlorophenol | U | 3.3E + 2 |
| 95-95-4 | 2,4,5-trichlorophenol | U | 8.0E + 2 |
| 78-59-1 | 2-chloronaphthalene | U | 3.3E + 2 |
| 88-75-5 | 2-nitroaniline | U | 8.0E + 2 |

verified

6/21/93

ANALYTICAL REPORT FOR SAMPLE No. EM0387

Page 2 of 5

EPA METHOD 8270, 3rd ED.
TARGET ANALYTE RESULTS

Field Sample ID: B07KQ6

| CAS No. | COMPOUND | RESULTS (ug/kg) | Method Detection Limit (MDL) (ug/kg) |
|-----------|----------------------------|--------------------|---|
| 131-11-3 | dimethylphthalate | U | 3.3E + 2 |
| 606-20-2 | 2,6-dinitrotoluene | U | 3.3E + 2 |
| 208-96-8 | acenaphthylene | U | 3.3E + 2 |
| 99-09-2 | 3-nitroaniline | U | 8.0E + 2 |
| 83-32-9 | acenaphthene | U | 3.3E + 2 |
| 51-28-5 | 2,4-dinitrophenol | U | 8.0E + 2 |
| 100-02-7 | 4-nitrophenol | U | 8.0E + 2 |
| 132-64-9 | dibenzofuran | U | 3.3E + 2 |
| 121-14-2 | 2,4-dinitrotoluene | U | 3.3E + 2 |
| 84-66-2 | diethylphthalate | U | 3.3E + 2 |
| 7005-72-3 | 4-chlorophenyl-phenylether | U | 3.3E + 2 |
| 86-73-7 | fluorene | U | 3.3E + 2 |
| 100-01-6 | 4-nitroaniline | U | 8.0E + 2 |
| 534-52-1 | 2-methyl-4,6-dinitrophenol | U | 8.0E + 2 |
| 86-30-6 | N-nitroso-diphenylamine | U | 3.3E + 2 |
| 122-66-7 | 1,2-diphenylhydrazine | U | 1.0E + 3 |
| 101-55-3 | 4-bromophenyl-phenylether | U | 3.3E + 2 |
| 319-84-6 | .alpha.-BHC | U | 1.0E + 3 |
| 319-85-7 | .beta.- BHC | U | 5.0E + 3 |
| 118-74-1 | hexachlorobenzene | U | 3.3E + 2 |
| 87-86-5 | pentachlorophenol | U | 8.0E + 2 |
| 58-89-9 | .gamma.-BHC | U | 1.0E + 3 |
| 85-01-8 | phenanthrene | U | 3.3E + 2 |
| 120-12-7 | anthracene | U | 3.3E + 2 |
| 319-86-8 | .delta.-BHC | U | 5.0E + 3 |
| 76-44-8 | heptachlor | U | 5.0E + 3 |
| 84-74-2 | di-n-butylphthalate | U | 3.3E + 2 |
| 309-00-2 | aldrin | U | 5.0E + 3 |
| 1024-57-3 | heptachlor epoxide | U | 5.0E + 3 |
| 206-44-0 | fluoranthene | U | 3.3E + 2 |
| 129-00-0 | pyrene | U | 3.3E + 2 |

Verified

6/21/93

ANALYTICAL REPORT FOR SAMPLE No. EM0387

Page 3 of 5

EPA METHOD 8270, 3rd ED.
TARGET ANALYTE RESULTS

Field Sample ID: B07KQ6

| CAS No. | COMPOUND | RESULTS (ug/kg) | Method Detection Limit (MDL) (ug/kg) |
|------------|----------------------------|--------------------|---|
| 959-98-8 | endosulfan I | U | 5.0E + 3 |
| 72-55-9 | 4,4'-DDE | U | 5.0E + 3 |
| 60-57-1 | dieldrin | U | 5.0E + 3 |
| 7421-93-4 | endrin aldehyde | U | 5.0E + 3 |
| 72-20-8 | endrin | U | 5.0E + 3 |
| 72-54-8 | 4,4'-DDD | U | 5.0E + 3 |
| 33213-65-9 | endosulfan II | U | 5.0E + 3 |
| 85-68-7 | butylbenzylphthalate | U | 3.3E + 2 |
| 50-29-3 | 4,4'-DDT | U | 5.0E + 3 |
| 1031-07-8 | endosulfan sulfate | U | 5.0E + 3 |
| 72-43-5 | p,p'-methoxychlor | U | 1.0E + 3 |
| 91-94-1 | 3,3'-dichlorobenzidine | U | 1.0E + 3 |
| 56-55-3 | benzo(a)anthracene | U | 3.3E + 2 |
| 117-81-7 | bis(2-ethylhexyl)phthalate | U | 3.3E + 2 |
| 218-01-9 | chrysene | U | 3.3E + 2 |
| 117-84-0 | di-n-octylphthalate | U | 3.3E + 2 |
| 205-99-2 | benzo(b)fluoranthene | U | 3.3E + 2 |
| 207-08-9 | benzo(k)fluoranthene | U | 3.3E + 2 |
| 50-32-8 | benzo(a)pyrene | U | 3.3E + 2 |
| 193-39-5 | indeno(1,2,3-cd)pyrene | U | 3.3E + 2 |
| 53-70-3 | dibenz(a,h)anthracene | U | 3.3E + 2 |
| 191-24-2 | benzo(g,h,i)perylene | U | 3.3E + 2 |
| 53494-70-5 | endrin ketone | U | 1.0E + 3 |
| 109-06-8 | 2-picoline | U | 1.0E + 3 |
| 62-50-0 | ethylmethanesulfonate | U | 1.0E + 3 |
| 66-27-3 | methylmethanesulfonate | U | 1.0E + 3 |
| 62-53-3 | aniline | U | 1.0E + 3 |
| 98-86-2 | acetophenone | U | 1.0E + 3 |
| 100-75-4 | N-nitroso-piperidine | U | 1.0E + 3 |
| 122-09-8 | a,a-dimethylphenethylamine | U | 1.0E + 3 |
| 87-65-0 | 2,6-dichlorophenol | U | 1.0E + 3 |

verified

6/21/93

ANALYTICAL REPORT FOR SAMPLE No. EM0387

Page 4 of 5

EPA METHOD 8270, 3rd ED.
TARGET ANALYTE RESULTS

Field Sample ID: B07KQ6

| CAS No. | COMPOUND | RESULTS (ug/kg) | Method Detection Limit (MDL) (ug/kg) |
|------------|--------------------------------|--------------------|---|
| 924-16-3 | N-nitroso-di-n-butylamine | U | 1.0E + 3 |
| 95-94-3 | 1,2,4,5-tetrachlorobenzene | U | 1.0E + 3 |
| 90-13-1 | 1-chloronaphthalene | U | 1.0E + 3 |
| 608-93-5 | pentachlorobenzene | U | 1.0E + 3 |
| 134-32-7 | 1-naphthylamine | U | 1.0E + 3 |
| 58-90-2 | 2,3,4,6-tetrachlorophenol | U | 1.0E + 3 |
| 91-59-8 | 2-naphthylamine | U | 1.0E + 3 |
| 62-44-2 | phenacetin | U | 1.0E + 3 |
| 92-67-1 | 4-aminobiphenyl | U | 1.0E + 3 |
| 23950-58-5 | pronamide (propyzamide) | U | 1.0E + 3 |
| 82-68-8 | pentachloronitrobenzene | U | 1.0E + 3 |
| 92-87-5 | benzidine | U | 1.0E + 3 |
| 60-11-7 | p-dimethylaminoazobenzene | U | 1.0E + 3 |
| 57-97-6 | 7,12-dimethylbenz(a)anthracene | U | 1.0E + 3 |
| 56-49-5 | 3-methylchloranthrene | U | 1.0E + 3 |
| 57-74-9 | chlordan | U | 1.0E + 4 |
| 8001-35-2 | toxaphene | U | 1.0E + 4 |
| 12674-11-2 | PCB-1016 | U | 1.0E + 4 |
| 11104-28-2 | PCB-1221 | U | 1.0E + 4 |
| 11141-16-5 | PCB-1232 | U | 1.0E + 4 |
| 53469-21-9 | PCB-1242 | U | 1.0E + 4 |
| 12672-29-6 | PCB-1248 | U | 1.0E + 4 |
| 11097-69-1 | PCB-1254 | U | 1.0E + 4 |
| 11096-82-5 | PCB-1260 | U | 1.0E + 4 |

Verified

John W. Ball 6/21/93

ANALYTICAL REPORT FOR SAMPLE No. EM0387

Page 5 of 5

NON-TARGET ANALYTE RESULTS
Additional Semi-Volatiles

Field Sample ID: B07KQ6

| CAS No. | COMPOUND | Scan Number | Results ug/kg | Footnotes |
|---------|----------------------------|-------------|---------------|-----------|
| | Aldol condensation product | 254 | 7.5E+2 | NEB R |
| | Aldol condensation product | 287 | 2.7E+2 | NEB-- R |

FOOTNOTES

- B The analyte was found in the method blank.
E The reported concentration is an estimate only. The response factor was assumed to be 1.00 relative to an internal standard.
K The isomer is unknown.
N Analytical standards were not analyzed for this compound.

vec-Sied
~~Submitted to~~
6/21/93



ANALYTICAL REPORT

Form ARF-AL

Page 1 of 3

Part 1 of 2

AMENDED

Date 5-17-93

Agency Identification Number S93-0091-FI

Account No. 3534C

Westinghouse Hanford Company
2355 Stevens Drive
MSIN H4-23 345 Hill Street/300 Area
Richland, WA 99352
Attention: Briana Colley

FAX (509) 372-2106

Telephone (509) 373-3225

Sampling Collection and Shipment

Sampling Site _____ Date of Collection February 16, 1993

Date of Collection February 16, 1993

Date Samples Received at Laboratory February 22, 1993

Analysis

Method of Analysis EPA 8150

Date(s) of Analysis March 26, 1993

Analytical Results

† See comment on last page.
ND Parameter not detected.
NR Parameter not requested.

() parameter between LOD and LOO.

NR Parameter not requested.

~~Editor: The Maikle~~

Examination Serial No. 57-100

Laboratory supervisor: Jose C. Danino

960 West LeVoy Drive / Salt Lake City, Utah 84123-2547 / (801) 266-7700
A Sorenson Company



ANALYTICAL REPORT

Form ARF-AL

Page 2 of 3

Part 2 of 2

AMENDED

Date 5-17-93

Agency Identification Number S93-0091-FI

Account No. 3534C

Westinghouse Hanford Company
2355 Stevens Drive
MSIN H4-23 345 Hill Street/300 Area
Richland, WA 99352
Attention: Briana Colley

FAX (509) 372-2106
Telephone (509) 373-3225

Sampling Collection and Shipment

Sampling Site _____ Date of Collection February 16, 1993

Date Samples Received at Laboratory February 22, 1993

Analysis

Method of Analysis EPA 8150

Date(s) of Analysis March 26, 1993

Analytical Results

† See comment on last page.
ND Parameter not detected.
NR Parameter not requested.

() Parameter between LOD and LOQ.

960 West LeVoy Drive / Salt Lake City, Utah 84123-2547 / (801) 266-7700
A Sorenson Company



ANALYTICAL REPORT

Form ARF-AL

Page 1 of 5

Part 1 of 4

Date _____
Agency Identification Number S93-0091-GI
Account No. 3534C

Westinghouse Hanford Company
2355 Stevens Drive
MSIN H4-23 345 Hill Street/300 Are
Richland, WA 99352
Attention: Briana Colley

FAX (509) 372-2106
Telephone (509) 373-3225

Sampling Collection and Shipment

Sampling Site 160687 Date of Collection February 16, 1993

Date Samples Received at Laboratory February 22, 1993

Analysis

Method of Analysis EPA 8141

Date(s) of Analysis March 08, 1993

Analytical Results

† See comment on last page.
ND Parameter not detected.
NR Parameter not requested.

(*) parameter between LOD and LOO.

verified ~~8/21/93~~
6/21/93

Khang C. Tang
Analyst: Khang C. Tang

Reviewers: Bob Wickman

Signatures on original
submission

Laboratory Supervisor: Jose C. Danino

960 West LeVoy Drive / Salt Lake City, Utah 84123-2547 / (801) 266-7700
A Sorenson Company



ANALYTICAL REPORT

Form ARF-AL

Page 2 of 5

Part 2 of 4

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Sampling Collection and Shipment

Sampling Site _____ Date of Collection February 16, 1993

Date Samples Received at Laboratory February 22, 1993

Analysis

Method of Analysis EPA 8141

Date(s) of Analysis March 08, 1993

Analytical Results

| Field Sample Number | Laboratory Number | Sample Type | Ethoprop ✓ | Fensulfothion ✓ | Fenthion ✓ | Morphos ✓ | Mevinphos ✓ | Naled ✓ | Parathion-methyl ✓ | Phorate ✓ |
|---------------------|-------------------|-------------|------------|-----------------|------------|-----------|-------------|---------|--------------------|-----------|
| QC-2202-1 | QC-2202-1 | SOIL | ND* | ND* | ND* | ND* | ND* | ND* | .061 | .051 |
| BL-2202-1 | BL-2202-1 | SOIL | ND* | ND* | ND* | ND* | ND* | ND* | ND* | ND* |
| B07KQ6 | ZM 0387 | SOIL | ND* | ND* | ND* | ND* | ND* | ND* | ND* | ND* |
| Limit of Detection | | | .01 | .01 | .01 | .01 | .01 | .01 | .01 | .01 |
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* See comment on last page.
 ND Parameter not detected.
 NR Parameter not requested.

** See comment on last page.
 () Parameter between LOD and LOQ.

verified
 BH
 6/21/93



ANALYTICAL REPORT

Form ARF-AL

Page 3 of 5

Part 3 of 4

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Sampling Collection and Shipment

Sampling Site _____ Date of Collection February 16, 1993

Date Samples Received at Laboratory February 22, 1993

Analysis

Method of Analysis EPA 8141

Date(s) of Analysis March 08, 1993

Analytical Results

| Field Sample Number | Laboratory Number | Sample Type | Ronnel ✓ µg/g | Stirephos ✓ µg/g | Dimethoate ✓ µg/g | EPN ✓ µg/g | Maledition ✓ µg/g | Monocrotophos ✓ µg/g | Parmothion ✓ µg/g | SULPOTEP ✓ µg/g |
|---------------------|-------------------|-------------|------------------|---------------------|----------------------|---------------|----------------------|-------------------------|----------------------|--------------------|
| QC-2202-1 | QC-2202-1 | SOIL | ND* | ND* | ND* | ND* | ND* | ND* | ND* | ND* |
| BL-2202-1 | BL-2202-1 | SOIL | ND* | ND* | ND* | ND* | ND* | ND* | ND* | ND* |
| B07KQ6 | EM 0387 | SOIL | ND* | ND* | ND* | ND* | ND* | ND* | ND* | ND* |
| Limit of Detection | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
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† See comment on last page.
ND Parameter not detected.
NR Parameter not requested.

** See comment on last page.
() Parameter between LOD and LOQ.

Verified
[Signature]
bjs/93



ANALYTICAL REPORT

Form ARF-AL

Page 4 of 5

Part 4 of 4

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Sampling Collection and Shipment

Sampling Site _____ Date of Collection February 16, 1993

Date Samples Received at Laboratory February 22, 1993

Analysis

Method of Analysis EPA 8141

Date(s) of Analysis March 08, 1993

Analytical Results

^t See comment on last page.
ND Parameter not detected.
NR Parameter not requested.

() Parameter between LOD and LOQ.

verified by
J. W. H. 6/28/93

ATTACHMENT 3
SUPPLEMENTAL INFORMATION SUMMARY

ANALYTICAL REPORT FOR SAMPLE No. BLANK

Page 1 of 5
 EPA METHOD 8270, 3rd ED.
 TARGET ANALYTE RESULTS

Field Sample ID: Method Blank

Date Extracted: 02/25/93

DataChem Set ID: S93-0091-II

Date of Analysis: 03/05/93

Sponsor: Westinghouse-Hanford Co.

File ID: CJ3BK

Method
 Detection
 Limit (MDL)
 (ug/kg)

| CAS No. | COMPOUND | RESULTS (ug/kg) | |
|-----------|-----------------------------|--------------------|----------|
| 62-75-9 | N-nitroso-dimethylamine | U | 1.0E + 3 |
| 108-95-2 | phenol | U | 3.3E + 2 |
| 111-44-4 | bis(2-chloroethyl)ether | U | 3.3E + 2 |
| 95-57-8 | 2-chlorophenol | U | 3.3E + 2 |
| 541-73-1 | 1,3-dichlorobenzene | U | 3.3E + 2 |
| 106-46-7 | 1,4-dichlorobenzene | U | 3.3E + 2 |
| 100-51-6 | benzyl alcohol | U | 1.0E + 3 |
| 95-50-1 | 1,2-dichlorobenzene | U | 3.3E + 2 |
| 95-48-7 | 2-methylphenol | U | 3.3E + 2 |
| 39638-329 | bis(2-chloroisopropyl)ether | U | 3.3E + 2 |
| 106-44-5 | 4-methylphenol | U | 3.3E + 2 |
| 621-64-7 | N-nitroso-di-n-propylamine | U | 3.3E + 2 |
| 67-72-1 | hexachloroethane | U | 3.3E + 2 |
| 98-95-3 | nitrobenzene | U | 3.3E + 2 |
| 78-59-1 | isophorone | U | 3.3E + 2 |
| 88-75-5 | 2-nitrophenol | U | 3.3E + 2 |
| 105-67-9 | 2,4-dimethylphenol | U | 3.3E + 2 |
| 111-91-1 | bis(2-chloroethoxy)methane | U | 3.3E + 2 |
| 65-85-0 | benzoic acid | U | 1.0E + 3 |
| 120-83-2 | 2,4,-dichlorophenol | U | 3.3E + 2 |
| 120-82-1 | 1,2,4-trichlorobenzene | U | 3.3E + 2 |
| 91-20-3 | naphthalene | U | 3.3E + 2 |
| 106-47-8 | 4-chloroaniline | U | 3.3E + 2 |
| 87-68-3 | hexachlorobutadiene | U | 3.3E + 2 |
| 59-50-7 | 4-chloro-3-methylphenol | U | 3.3E + 2 |
| 91-57-6 | 2-methylnaphthalene | U | 3.3E + 2 |
| 77-47-4 | hexachlorocyclopentadiene | U | 3.3E + 2 |
| 88-06-2 | 2,4,6-trichlorophenol | U | 3.3E + 2 |
| 95-95-4 | 2,4,5-trichlorophenol | U | 8.0E + 2 |
| 78-59-1 | 2-chloronaphthalene | U | 3.3E + 2 |
| 88-75-5 | 2-nitroaniline | U | 8.0E + 2 |

6/21/93

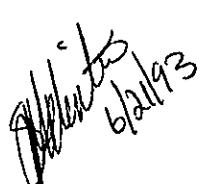
ANALYTICAL REPORT FOR SAMPLE No. BLANK

Page 2 of 5

EPA METHOD 8270, 3rd ED.
TARGET ANALYTE RESULTS

Field Sample ID: Method Blank

| CAS No. | COMPOUND | RESULTS (ug/kg) | Method Detection Limit (MDL) (ug/kg) |
|-----------|----------------------------|--------------------|---|
| 131-11-3 | dimethylphthalate | U | 3.3E+2 |
| 606-20-2 | 2,6-dinitrotoluene | U | 3.3E+2 |
| 208-96-8 | acenaphthylene | U | 3.3E+2 |
| 99-09-2 | 3-nitroaniline | U | 8.0E+2 |
| 83-32-9 | acenaphthene | U | 3.3E+2 |
| 51-28-5 | 2,4-dinitrophenol | U | 8.0E+2 |
| 100-02-7 | 4-nitrophenol | U | 8.0E+2 |
| 132-64-9 | dibenzofuran | U | 3.3E+2 |
| 121-14-2 | 2,4-dinitrotoluene | U | 3.3E+2 |
| 84-66-2 | diethylphthalate | U | 3.3E+2 |
| 7005-72-3 | 4-chlorophenyl-phenylether | U | 3.3E+2 |
| 86-73-7 | fluorene | U | 3.3E+2 |
| 100-01-6 | 4-nitroaniline | U | 8.0E+2 |
| 534-52-1 | 2-methyl-4,6-dinitrophenol | U | 8.0E+2 |
| 86-30-6 | N-nitroso-diphenylamine | U | 3.3E+2 |
| 122-66-7 | 1,2-diphenylhydrazine | U | 1.0E+3 |
| 101-55-3 | 4-bromophenyl-phenylether | U | 3.3E+2 |
| 319-84-6 | .alpha.-BHC | U | 1.0E+3 |
| 319-85-7 | .beta.- BHC | U | 5.0E+3 |
| 118-74-1 | hexachlorobenzene | U | 3.3E+2 |
| 87-86-5 | pentachlorophenol | U | 8.0E+2 |
| 58-89-9 | .gamma.-BHC | U | 1.0E+3 |
| 85-01-8 | phenanthrene | U | 3.3E+2 |
| 120-12-7 | anthracene | U | 3.3E+2 |
| 319-86-8 | .delta.-BHC | U | 5.0E+3 |
| 76-44-8 | heptachlor | U | 5.0E+3 |
| 84-74-2 | di-n-butylphthalate | U | 3.3E+2 |
| 309-00-2 | aldrin | U | 5.0E+3 |
| 1024-57-3 | heptachlor epoxide | U | 5.0E+3 |
| 206-44-0 | fluoranthene | U | 3.3E+2 |
| 129-00-0 | pyrene | U | 3.3E+2 |



John W. Smith
6/21/93

ANALYTICAL REPORT FOR SAMPLE No. BLANK

Page 3 of 5

EPA METHOD 8270, 3rd ED.
TARGET ANALYTE RESULTS

Field Sample ID: Method Blank

| CAS No. | COMPOUND | RESULTS (ug/kg) | Method Detection Limit (MDL) (ug/kg) |
|------------|----------------------------|--------------------|---|
| 959-98-8 | endosulfan I | U | 5.0E+3 |
| 72-55-9 | 4,4'-DDE | U | 5.0E+3 |
| 60-57-1 | dieldrin | U | 5.0E+3 |
| 7421-93-4 | endrin aldehyde | U | 5.0E+3 |
| 72-20-8 | endrin | U | 5.0E+3 |
| 72-54-8 | 4,4'-DDD | U | 5.0E+3 |
| 33213-65-9 | endosulfan II | U | 5.0E+3 |
| 85-68-7 | butylbenzylphthalate | U | 3.3E+2 |
| 50-29-3 | 4,4'-DDT | U | 5.0E+3 |
| 1031-07-8 | endosulfan sulfate | U | 5.0E+3 |
| 72-43-5 | p,p'-methoxychlor | U | 1.0E+3 |
| 91-94-1 | 3,3'-dichlorobenzidine | U | 1.0E+3 |
| 56-55-3 | benzo(a)anthracene | U | 3.3E+2 |
| 117-81-7 | bis(2-ethylhexyl)phthalate | U | 3.3E+2 |
| 218-01-9 | chrysene | U | 3.3E+2 |
| 117-84-0 | di-n-octylphthalate | U | 3.3E+2 |
| 205-99-2 | benzo(b)fluoranthene | U | 3.3E+2 |
| 207-08-9 | benzo(k)fluoranthene | U | 3.3E+2 |
| 50-32-8 | benzo(a)pyrene | U | 3.3E+2 |
| 193-39-5 | indeno(1,2,3-cd)pyrene | U | 3.3E+2 |
| 53-70-3 | dibenz(a,h)anthracene | U | 3.3E+2 |
| 191-24-2 | benzo(g,h,i)perylene | U | 3.3E+2 |
| 53494-70-5 | endrin ketone | U | 1.0E+3 |
| 109-06-8 | 2-picoline | U | 1.0E+3 |
| 62-50-0 | ethylmethanesulfonate | U | 1.0E+3 |
| 66-27-3 | methylmethanesulfonate | U | 1.0E+3 |
| 62-53-3 | aniline | U | 1.0E+3 |
| 98-86-2 | acetophenone | U | 1.0E+3 |
| 100-75-4 | N-nitroso-piperidine | U | 1.0E+3 |
| 122-09-8 | a,a-dimethylphenethylamine | U | 1.0E+3 |
| 87-65-0 | 2,6-dichlorophenol | U | 1.0E+3 |



6/21/93

ANALYTICAL REPORT FOR SAMPLE No. BLANK

Page 4 of 5

EPA METHOD 8270, 3rd ED.
TARGET ANALYTE RESULTS

Field Sample ID: Method Blank

| CAS No. | COMPOUND | RESULTS (ug/kg) | Method Detection Limit (MDL) (ug/kg) |
|------------|--------------------------------|--------------------|---|
| 924-16-3 | N-nitroso-di-n-butylamine | U | 1.0E +3 |
| 95-94-3 | 1,2,4,5-tetrachlorobenzene | U | 1.0E +3 |
| 90-13-1 | 1-chloronaphthalene | U | 1.0E +3 |
| 608-93-5 | pentachlorobenzene | U | 1.0E +3 |
| 134-32-7 | 1-naphthylamine | U | 1.0E +3 |
| 58-90-2 | 2,3,4,6-tetrachlorophenol | U | 1.0E +3 |
| 91-59-8 | 2-naphthylamine | U | 1.0E +3 |
| 62-44-2 | phenacetin | U | 1.0E +3 |
| 92-67-1 | 4-aminobiphenyl | U | 1.0E +3 |
| 23950-58-5 | pronamide (propyzamide) | U | 1.0E +3 |
| 82-68-8 | pentachloronitrobenzene | U | 1.0E +3 |
| 92-87-5 | benzidine | U | 1.0E +3 |
| 60-11-7 | p-dimethylaminoazobenzene | U | 1.0E +3 |
| 57-97-6 | 7,12-dimethylbenz(a)anthracene | U | 1.0E +3 |
| 56-49-5 | 3-methylchloranthrene | U | 1.0E +3 |
| 57-74-9 | chlordan | U | 1.0E +4 |
| 8001-35-2 | toxaphene | U | 1.0E +4 |
| 12674-11-2 | PCB-1016 | U | 1.0E +4 |
| 11104-28-2 | PCB-1221 | U | 1.0E +4 |
| 11141-16-5 | PCB-1232 | U | 1.0E +4 |
| 53469-21-9 | PCB-1242 | U | 1.0E +4 |
| 12672-29-6 | PCB-1248 | U | 1.0E +4 |
| 11097-69-1 | PCB-1254 | U | 1.0E +4 |
| 11096-82-5 | PCB-1260 | U | 1.0E +4 |

John W. Smith
6/2/93

ANALYTICAL REPORT FOR SAMPLE No. BLANK

Page 5 of 5

NON-TARGET ANALYTE RESULTS
Additional Semi-Volatiles

Field Sample ID: Method Blank

| CAS No. | COMPOUND | Scan Number | Results ug/kg | Footnotes |
|---------|----------------------------|-------------|---------------|-----------|
| | Aldol condensation product | 254 | 9.6E+2 | NE R |
| | Aldol condensation product | 287 | 3.8E+2 | NE R |

FOOTNOTES

- B The analyte was found in the method blank.
- E The reported concentration is an estimate only. The response factor was assumed to be 1.00 relative to an internal standard.
- K The isomer is unknown.
- N Analytical standards were not analyzed for this compound.

John M. Ball 6/1/93

OFFICE OF SAMPLE MANAGEMENT
RECORD OF DISPOSITION

ROD-93-00070

Record of Disposition No.

DATE: 3/19/93

LABORATORY: DataChem

PROJECT TITLE/NO.: North Slope ERA/SAF# 92-451

NCR NO.: 051748

SAMPLE IDENTIFICATION NUMBERS:

B07KQ6

DESCRIPTION OF EVENT:

The sample extract was mistakenly spiked with the SW-846 Method 8080 Pesticide/PCB matrix spike solution. Reextraction of the sample is not a viable solution since the reextraction would be performed at least 22 days beyond the 7 day holding time.

DISPOSITION OF SAMPLES:

With consent from F. W. Gustafson, cancel the Pesticide /PCB analysis of the sample. DataChem has issued an internal Nonconformance Report documenting the occurrence.

APPROVAL SIGNATURES:

W. E. Strohben/ W. E. Strohben
OSM Project Coordinator (Print/Sign Name)

3/19/93
Date

F. W. Gustafson/ F. W. Gustafson
Technical Representative (Print/Sign Name)

3/23/93
Date

N/A
Quality Assurance (Print/Sign Name)

Date

Westinghouse
Hanford Company

NONCONFORMANCE REPORT

1. Page 1
of 1

2. Preprinted No. : 051748
QA Log No. EQA-93-062

| | | | | |
|--|--|------------------------------------|---|---|
| 3. P. O., W. O., or Job Control No. <u>N/A</u> | 4. System/End Use <u>RI/FS</u> | 5. Item/Material <u>SAMPLES</u> | 6. Dwg./Spec./Other No. <u>B07KQ6</u> | 7. Rev. <u>N/A</u> |
| 8. Program/Project/Other <u>NORTH SLOPE ERA</u> | | 9. Safety Class <u>N/A</u> | 10. ASME Code Items <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If yes, notify authorized inspector) | |
| 11. Supplier Name/Address <u>DATACHEM</u> | | | 12. Notification of Potential Occurrence Required <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | |
| 13. Code: Lot/Heat/Serial <u>N/A</u> | 14. Lot Size <u>1</u> | 15. Sample <u>1</u> | 16. Qty. Acc. <u>0 -</u> | 17. Inspection Criteria <input type="checkbox"/> Dwg. <input type="checkbox"/> Spec. <input type="checkbox"/> Insp. Plan <input checked="" type="checkbox"/> Other CLP SOW OLM 01.2, <u>D-151/PEST 5.1.1-2</u> |
| 18. Item | 19. Description of Nonconformance (list serial no. where applicable) <u>THE PESTICIDE/PCB EXTRACT WAS MISTAKENLY SPIKE WITH THE ISN-946 METHOD B080 MATRIX SPIKE SOLUTION. AN UNSPIKE PESTICIDE/PCB SAMPLE COULD NOT BE ANALYZED. THIS OCCURRENCE HAS BEEN DOCUMENTED IN AN INTERNAL DATACHEM NONCONFORMANCE REPORT</u> | | | 22. Disposition, Justification, and Instructions <u>CANCEL THE PESTICIDE/PCB ANALYSIS OF THE SAMPLE. DATA CHEM HAS ISSUED AN INTERNAL NONCONFORMANCE REPORT DOCUMENTING THE OCCURRENCE</u> <i>3/29/93</i> |

| | | | |
|---|--|--|---------------------------------|
| 20. Originator's Signature <u>W. E. STROBBEN</u> | Date <u>3/19/93</u> | 23. Design Document Change Required? <input type="checkbox"/> Yes, Doc. No. _____ <input type="checkbox"/> No | |
| 21. Cognizant QA Manager's Signature <u>J. B. Deamer</u> | Date <u>3/29/93</u> | 24. Corrective Action Required? <input type="checkbox"/> Yes, No. _____ <input type="checkbox"/> No | |
| 25. Cognizant Engineer <u>F.W. GUSTAFSON</u> | Date <u>6/16/93</u> | 26. Technical Rep. Signature/Org. _____ Date _____ | Signature/Org. _____ Date _____ |
| Disp. App. | QA Engineer <u>R.L. HAN</u> | Date <u>6/16/93</u> | Signature/Org. _____ Date _____ |
| Close | 27. Accept <input checked="" type="checkbox"/> Reject <input type="checkbox"/> Follow on NCR _____ | <u>R. L. Hand</u> <u>6/16/93</u> QA/C Personnel Date | |

DATACHEM LABORATORIES NONCONFORMANCE REPORT (NCR)

Directions: Complete report, sign, distribute green original to Quality Control Section, one copy to your Section Manager, and one copy to the appropriate Project Manager.

Set ID/Lot No(s): 893-0091-H1

Submitted by: Guangyue Liu

Analysis/Analyte: 8080 Part/PCB

Account #: 3534

(Print Name)

Client: Westinghouse

Section: PA

Sample #'s Affected: EM 0387

Date Documented: 3-17-93

Date of Occurrence:

DEFICIENCY DESCRIPTION (Check appropriate box/boxes and explain below):

- Instrument failure
- Incorrect sample documents
- Unacceptable sample condition
- Holding time exceeded
- Unacceptable sample storage
- Incorrect sample preparation
- Incorrect analysis
- Procedure
- Unacceptable QC sample results
- Contaminated blanks
- Calibration
- Transcription or recording error
- Failure to document
- Other (Explain below)
- Unacceptable duplicate results

BRIEFLY DESCRIBE DEFICIENCY:

Sample EM 0387 showed the same results at MS and MSD. The sample was obviously mis-spiked with 8080 matrix spike solution.

- PROCEED WITH ANALYSIS.
 DO NOT ANALYZE

PROJECT MANAGER NOTIFIED (DATE): 3-17-93

ACTIONS REQUIRED OR TAKEN (Check appropriate box/boxes and explain below):

- Recalibrate instruments
- Replace equipment
- Reanalyze samples
- Retrain personnel
- Reprepare samples
- Revise: Procedure Method
- None required (Explain below)
- Other (Explain below)

BRIEFLY DESCRIBE ACTIONS TAKEN:

QA REVIEW AND APPROVAL:

QA COMMENTS:

THESE DATA ARE:

- USABLE
- USABLE (FLAGGED) * SEE COMMENT
- NOT USABLE * SEE COMMENT

Reviewed by QA

DATE

Updated: 12/92



**Westinghouse
Hanford Company**

NONCONFORMANCE REPORT

1. Page 1
of 1

| | |
|-------------------|------------------------|
| 2. Preprinted No. | 051748 |
| QA Log No. | EQ-A-93-062 |

| | | | | | | |
|---|---|-----------------|--|------|----------------|------|
| 20. Originator's Signature <u>W.E. STROHBECK</u> | | Date 3/19/93 | 23. Design Document Change Required? <input type="checkbox"/> Yes, Doc. No. _____ <input type="checkbox"/> No | | | |
| 21. Cognizant QA Manager's Signature <u>J.S. Strohbeck</u> | | Date 3/29/93 | 24. Corrective Action Required? <input type="checkbox"/> Yes, No. _____ <input type="checkbox"/> No | | | |
| Disp. App. | 25. Cognizant Engineer <u>F.W. GUSTAFSON</u> | Date 6/10/93 | 26. Technical Rep. QA Engineer | Date | Signature/Org. | Date |
| | | Date 6/10/93 | Signature/Org. | Date | Signature/Org. | Date |
| Close | 27. Accept <input checked="" type="checkbox"/> Reject _____ Follow on NCR _____ | | <u>B. Strohbeck</u> 6/10/93 QA/C Personnel | | | |

OFFICE OF SAMPLE MANAGEMENT
RECORD OF DISPOSITION

ROD-93-00070

Record of Disposition No.

DATE: 3/19/93

LABORATORY: DataChem

PROJECT TITLE/NO.: North Slope ERA/SAF# 92-451

NCR NO.: 051748

SAMPLE IDENTIFICATION NUMBERS:

B07KQ6

DESCRIPTION OF EVENT:

The sample extract was mistakenly spiked with the SW-846 Method 8080 Pesticide/PCB matrix spike solution. Reextraction of the sample is not a viable solution since the reextraction would be performed at least 22 days beyond the 7 day holding time.

DISPOSITION OF SAMPLES:

With consent from F. W. Gustafson, cancel the Pesticide /PCB analysis of the sample. DataChem has issued an internal Nonconformance Report documenting the occurrence.

[Signature]
bhall93

APPROVAL SIGNATURES:

W. E. Strohben / *[Signature]*
OSM Project Coordinator (Print/Sign Name)

3/19/93
Date

F. W. Gustafson / *[Signature]*
Technical Representative (Print/Sign Name)

3/23/93
Date

N/A
Quality Assurance (Print/Sign Name)

Date